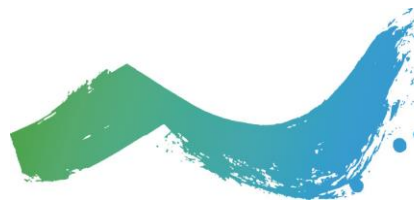




# National Stakeholder Consultations on Water: Supporting the Post-2015 Development Agenda

**Uzbekistan**  
**March 2013**



**Global Water  
Partnership**  
Central Asia and Caucasus



**The Post 2015 Water Thematic Consultation**

# **NATIONAL CONSULTATIONS ON WATER IN THE POST-2015 DEVELOPMENT AGENDA**

**Tashkent, March 2013**

Report prepared by Mansur Abduraimov – CWP-Uzbekistan Coordinator and Vokhid Akhmadjonov – Head of Water Balance Division, Ministry of Agriculture and Water Resources, Uzbekistan

## **BACKGROUND**

In 2011 under request and support from Stockholm International Water Institute, Country Water Partnership of Uzbekistan conducted 2-levels survey of the water sector in Uzbekistan to generate input to a national status report on integrated approaches in the development, management and use of water resources. The key outputs of that status report were used as a basis for new round of national consultations in Uzbekistan on water issues in the post-2015 development agenda. CWP-Uzbekistan conducted round table consultation with the key stakeholders' involvement, which was held on 11 March 2013 in Training Center of the Interstate Commission for Water Coordination (partner of GWP CACENA) in Tashkent. This report reflects the main outputs of the round table conversations.

## **1. IMPORTANCE OF WATER IN NATIONAL DEVELOPMENT OF UZBEKISTAN**

The territory of Uzbekistan is represented by the combination of densely populated oases located mainly along upper and middle reaches of two great rivers (Amudarya and Syrdarya) and their tributaries, as well as by present and former irrigation areas in their lower reaches and deltas with the deserts surrounding them, which often swap places due to natural processes that change directions of streams or destructive activity of a human being. The zones along main rivers being the ancient origin of social life were developing by forming layers of sediments and burying traces of human existence in depths of the centuries-old deposits. They are so rich in numerous archaeological finds that were discovered during excavations in Tashkent (ancient Shash), Samarkand, Bukhara, Fergana Valley. All these ancient settlements are located close to fine water sources that predetermined opportunities for life and well-being: Chirchik river for Tashkent, Zeravshan river for Samarkand and Bukhara, Syrdarya river for Fergana Valley.

Most of Uzbekistan is under arid conditions. Scant precipitation (less than 350-400 mm a year), extremely low humidity, high evaporation rates, abundant solar radiation are major features of climate in the country covering an area of 44884000 hectares.

However, in those places where, at least, small amounts of water emerge nature blossoms out. Life always arises near water sources: lakes, springs, and temporary water bodies in depressions that accumulate rainwater or water of thawing snow. Here, human beings can find not only water for drinking but also food due to an abundance of various plants and animals near water bodies in the desert areas. Just owing to these facts, the people in Uzbekistan idolize water and glorify it in innumerable legends, stories and parables as the fountain of life and a means for life continuation. Water is identified with life and life is identified with water.

Water resources management always required strict implementing some written or unwritten principles of mutual respect that were often anchored in traditions, rules and customs, as well as in minds of people who had to appreciate, protect and adore water and everything related to water. According to all local traditions and especially in line with the spirit and moral base of ancient relations between people created thanks to original religions and later by Muslim religion, water was never a source of profit; and water was and must be in the future the basis for survival and even well-being of humanity.

Uzbekistan to great extent depends on its neighbours in the matter of uninterrupted supply from surface waters, since only 10-15% of all water resources used in the country are formed on its territory. The share of water resources being formed directly on the territory of Uzbekistan makes 6% in the Amudarya river basin, 16% in the Syrdarya river basin, and all over the country it makes about 8 % out of the total water yield of the Aral Sea Basin.

Those facts make it challenging to ensure water for future generations within Uzbekistan. Other threats to guaranteed access to water in Uzbekistan include:

- Institutional weakness of water resources management and lack of prospective planning;
- Lack of sound legal frameworks for water regulation at international (transboundary) and national levels;
- Irrational and ineffective water use;
- Negative interference in water management from state authorities such as local governments, shirkats cooperatives, etc.;
- Commercialization of water.

## **2. KEY NATIONAL PRIORITIES FOR THE SUSTAINABLE DEVELOPMENT OF WATER**

During the consultation meeting the participants agreed on the following **General Priority Directions of Water Management in Uzbekistan:**

1. Improvement and modernization of the hydrotechnic structures:
  - Construction and reconstruction of all water facilities;
2. Filtration and cleaning works;
3. Measures to improve the safety and reliability of major water infrastructure;
4. Automating management of water facilities.
5. Water saving and "green" technologies; Incentives for water saving;
6. Introduction of new technologies and methods of irrigation;

Target: within the period of 2013-2017, the Government will provide land users and farmers with 3% concessional long-term loans for the implementation of drip irrigation on the area of more than 25 000 hectares. These farms will be exempted from land and other taxes for 5 years.

7. Improvement of operational management of the water resources. Use of information resources in the monitoring, planning and management of water resources;
8. Capacity building - Skills development programs for water management specialists and technicians; Capacity building of water users associations.
9. Re-use of drainage water;
10. Fighting salinity and desertification.

**Specific issues are problems of the Aral Sea and its surrounding area.** "Today, the difficulty and complexity of the Aral Sea problem has not only environmental, but also social, economic and demographic impacts of planetary consequences" - from the speech of the President of Uzbekistan at UN Session (New York, September 20, 2010)

Government of Uzbekistan believes that the states located in the basin of the transboundary rivers can and should promote regional cooperation in the water sector. Such interaction is the key to the development and achievement of the mutually acceptable solutions to the rational use of transboundary water resources. Committed to the international law and regulations Uzbekistan is the only country in the Central Asia - party to the both UN universal conventions that regulate transboundary water issues.

## **2.1. THE KEY WASH PRIORITIES**

In **Uzbekistan** there are 265 cities, towns and settlements, 11.844 villages, including 903 in the hardly accessible small villages. In certain provinces of the country (Bukhara, Khorezm, Karakalpakstan) coverage of population with water supply systems is only 20-25 %. Water ducts and water supplying pipelines in the cities and settlements of the country are made out of the steel pipes. During the last 20-25 years of their operation, their wear-and-tear rate has reached 50%. Water pipelines are not being to their full capacity, thus water losses reach the rate of 40%. The oldest and the most developed system in Uzbekistan is the potable water supply system of the city of Tashkent. Water supply of Tashkent is being effectuated out of two sources: surface and underground located in the basin of the Chirchik River.



Fig.1. Over 40% of rural population in Fergana Valley use untreated water for household needs out of the wells and aryks (open ditches).

**Table 1. Indicators of the water supply systems' operation in Uzbekistan**

Accessibility of water for population, %		Average actual water consumption, l/day per person	Average duration of water supply, hour/day		Water loss, %	Tariff rate* \$/m <sup>3</sup>	Payment collection rate, %	Equipment rate with water meters, %
Urban	Rural		Urban	Rural				
90	71	100-700	18	8	45	0.15	80	85

**Table 2. Typical indicators of the sanitation systems in Uzbekistan**

Coverage with sanitation system, %		Length of the sanitation network pipelines, km	Number of Sewage Treatment Plants		Settlements covered with sanitation systems	Average age of sanitation systems
Urban	Rural		Total	incl. existing		
85	40	>10000	>100		197	>30

In **Uzbekistan** centralized sanitation systems exist mostly in the major cities. In the Capital of Tashkent there is an incomplete divided sanitation system, when the sewage is being drained from the territory of the city to the city's sewage treatment plants. Sewage water of the city is delivered to 3 treatment plants, with a total capacity of 1.9 million m<sup>3</sup> per day (two-steps treatment, i.e. mechanical and biological steps).

Starting from 2001 the "Uzkommunkhismat" Agency under the Cabinet of Ministers of the Republic of Uzbekistan is the state authority that governs the public utilities sector. "Uzkommunkhizmat" Agency comprises four inter-regional water pipelines: Tuyamuyun-Nukus, Tuyamuyun-Urgench, Damkhoja and Dekhkanabad, Khojaipak inter-district water pipeline and the main pipeline of Chimgan-Charvak recreational zone. Need in construction of the inter-regional water pipelines in Uzbekistan was caused by the fact that in certain areas of the country there are no sources of water meeting the standards of water quality. The structure of the Agency comprises the National Training and Research Engineering Center "Uzkommunukvtashkilotchi."

In 1999 the design institutes "Uzbekkommunloyiha" and "Suvtaminoti" on the basis of all previous programs have developed the "Adjusted structure of water supply development of the Republic of Uzbekistan based on the new regulatory and technological foundation until 2010." This structure has been reviewed and agreed by the relevant local authorities in all provinces of the country and has been approved by the Ministry for Public Utilities (Directive No.157 of 09.11.1999). Since that moment, it is

the essential document for management of the design and development of the urban and rural water supply in the country. Foreign investments to Uzbekistan are attracted in the form of soft loans provided by foreign banks, international financial institutions, and foreign governmental financial organizations against the guarantees of the Government of the Republic of Uzbekistan, as well as the grants and technical assistance. The following projects are under implementation in Uzbekistan:

- “Water supply of cities of Bukhara and Samarqand,” “Clean water, sanitation and human health,” World Bank for Reconstruction and Development and International Development Association.
- Improvement of the water supply system of the cities of Gulistan, Djizzak and Qarshi,” Asian Development Bank.
- “Improvement of the potable water supply system in the Republic of Karkalpakstan and Khorezm Province,” ADB and Iranian Export Development Bank.
- “Improvement of the water supply of the cities of Nukus and Urgench,” Kuwait Economic Development Fund.
- “Improvement of the water supply system of the city of Tashkent,” European Bank for Reconstruction and Development.
- “Reconstruction of the sewage treatment plants in the city of Qarshi with their additional purification and treatment of sediment,” Islamic Development Bank.
- “Improvement of water supply in Bukhara Province,” French Government and the Kingdom of Spain.

**Uzbekistan’s national priority in sustainable water supply and sanitation.**

Uzbekistan has adopted the United Nations Millennium Declaration and trying its best to meet the Millennium Development Goals regarding access to safe drinking water and basic sanitation. However, Uzbekistan is not able to assure that the targets will be met by 2015, due to exhaustion of WWS systems, inefficient water use, poor maintenance and operation works, lack of economic mechanisms and effective governance systems. Poor WSS services are result of considerable reduction in investments into the sector due to general economic recession, decline in earnings and budget deficits. Hence, to improve access to drinking water and basic sanitation, Uzbekistan needs substantial investments into the sector. Given that IWRM has been recognized as an effective tool to address water-related challenges, more persistent endeavors to integrate WSS into IWRM are required.

To identify the extent of progress towards achievement of the MDGs in water supply and sanitation (WSS) sector and to integrate WSS into IWRM system Uzbekistan is needed:

- Establish governmental advisory service on efficient water use for drinking and municipal needs.
- Unless the on-going process, there is need for additional research projects and preparation monitoring and evaluation tools to (a) assess investment rates and growth of coverage with water pipelines of urban and rural population; (b) analyze ecological compatibility of on-going WSS projects and extension of the coverage with sewage treatment plants in all provinces; (c) identify rates of daily water consumption per person for drinking and household needs, including estimation of different indicators that influence on quantity of water used in any specific site.

- Set up measures to integrate WSS into IWRM system.

## 2.2. KEY WASTE WATER AND WATER QUALITY PRIORITIES

Uzbekistan sets up specific target to increase drainage water use by 4,1 km<sup>3</sup> a year that would account for 30% drainage water reuse in irrigation. Drainage water use for irrigated agriculture will help to solve two issues: to improve ecological situation in river basins and increase water availability:

- Existing solution makes use of drainage water for crop irrigation on the basis of evaluating their actual amount and including them into water consumption plan within formation zone.
- Innovative solution requires a set of measures to address (a) drainage water use for irrigation, (b) reduction in return flow through application of water saving technologies for furrow irrigation; and (c) stop discharging fresh groundwater into drainage networks and make use of it in irrigation.

Immediate actions in this respect include: 1) identification of areas of drainage water formation with various volumes and quality, with different dynamics in flow and quality over many years and yearly; 2) identification of conditions of formation and feeding drainage water; 3) zoning of various types of drainage water in accordance with conditions of formation, feeding, volumes and quality.

## 2.3. SUGGESTED AREAS FOR FUTURE SUSTAINABLE DEVELOPMENT TARGETS FOR WATER

The **first National priority is requirement to develop forecast for future water situation** in Uzbekistan for as a minimum next 25 years and options for water guarantee as recommendations for decision-makers based on good practices at national and international levels. To adopt national “road-map” for sustainable water development keeping in mind issues at the Aral Sea Basin scope and scale it is needed:

- development of prospective joint with neighboring countries vision tools such as the Aral Sea basin model (ASBmm) and prospective planning with taking into consideration the interests of all water users;
- cooperation between national hydrometeorological services to enable reliable forecasts and early warning systems;
- transition to a sound system of long-term and seasonal water resources regulations to ensure sustainability and predictability of water management and mitigation of extreme water conditions; come to 20% decrease in the total and unit water use by 2030 through reduced organizational losses;
- widespread adoption of water conservation measures and improvement of water productivity, especially in irrigated agriculture; and
- development of mechanisms for adaptation to climatic and hydrological variations.

## **Priorities in issues related to risk management and water security**

Uzbekistan has an extensive network of water infrastructure:

- 180 000 km of the canal network
- 140 000 km of drainage system
- 160 000 facilities, of which more than 800 are major
- more than 1,500 large pumping stations with an annual energy consumption of 8.2 billion kWh
- more than 4,100 wells for irrigation
- more than 4,300 wells for drainage
- more than 41,500 qualified specialists

The biggest concern in Uzbekistan is about transboundary water infrastructure. While bringing multiple benefits in terms of seasonal and long-term flow regulation, large dams also bear a significant potential threat. In the case of natural events and anthropogenic accidents, disastrous effects may occur across the region. The natural ageing of dams in Central Asia, many of which were built 30 to 40 years ago, requires close supervision of their technical condition and the execution of proper repair and rehabilitation work. The high seismic activity of the region adds another layer of complication for dam operations and calls for extra-care in their construction.

Water security issues are linked to appropriate management of the risk related to climatic variations, natural and anthropogenic hazards. As research shows, current and future climate changes will be accompanied by an increase in inter-annual variability and lead to increased frequency and depth of hydrological drought in the region. Glaciers retreat will have a significant impact on changing the flow in the first half of the XXI century. In a changing climate, when the mudflow activity could increase tenfold, protection against mudslides, floods and landslides becomes of national and international importance.

To solve the problem it is needed a National strategy and action plan to build institutional and legal frameworks on sustainability of large infrastructures beyond national boundaries (in the transboundary scale) to ensure future water security:

- Monitor and assess long-term safety of hydraulic structures, especially on transboundary watercourses, and create relevant public institutions to fulfill these functions;
- Build capacity of national and regional bodies to ensure safety of hydraulic structures and to control floods, mudslides and other emergencies;
- Draw up and sign regional (basin) agreements on safety of large structures.

Uzbekistan has intention for adaptation of water infrastructure in order to reduce the risks of floods, droughts, landslides and other disasters caused by climatic changes and anthropogenic factors:

- priority should be given to activities related to water saving and environmental protection;
- it is necessary to create a simulation system for the detailed evaluation and management of water resources.
- introduction of water conservation technologies in agricultural production, industrial and domestic sectors;



- to compensate for the increase in the inter-annual variability of river flow and its intra-annual variations due to glaciers retreat, it is necessary to design and construct reservoirs on the rivers mainly for seasonal regulation and flood control, as well as flood prevention and water control structures.

**Uzbekistan sets up priorities in the field of transboundary watercourses management for the benefits of all countries of the region.** It has been above twenty years since the international cooperation on transboundary rivers among the Aral Sea basin countries started. The basis for the cooperation was laid down by the Ministries of Water Resources of the Central Asian Republics on 12 September 1991 when they signed a statement acknowledging the necessity of “solving the issue of joint use of the Aral Sea basin waters as an integral whole based on common for all the states principles of equality and fair management of water use with consideration of the interests of the nations residing in the region”. On this basis, “The Agreement on Cooperation in the Area of Joint Management of the Use and Protection of Water Resources of Interstate Sources” was signed on 18 February 1992. This agreement created Interstate Coordination Water Commission (ICWC), which has played an important role in retaining previously used mechanisms of distribution of water resources of international watercourses.

On April 28, 2009, the Heads of the Central Asian states signed a Joint Statement, highlighting the important role of IFAS in coordinating of activities and addressing the fundamental issues of cooperation between the countries in Central Asia and the donor community, including international financial institutions. The Heads of the States also expressed in this Joint Statement their commitments to further improve the organizational structure and contractual and legal framework of IFAS in order to increase efficiency of its activities and achieve more active interaction with financial institutions and donors in implementation of the projects and programs related to solving the Aral Sea basin issues. In addition, the Heads of the States confirmed their commitments to the principles of the integrated water resources management (IWRM). The Heads of the State-Founders of IFAS also confirmed their interest in development of a mutually acceptable mechanism for the multi-purpose use of water resources and protection of the environment in Central Asia, with consideration of the interests of all the states in the region.

Promotion of cooperation in transboundary water areas on the basis of observation of the international law principles and regional agreements will be based on:

- Readiness for assessment of possibilities for joining international water conventions and developing on their basis draft agreements on transboundary watercourses
- Initiation of the dialogue between the Central Asian states on development of mutually acceptable rules and regulations for water resources management on the basis of the principles of the international law and provisions of regional agreements.

As leader of IFAS during coming three years, Uzbekistan is going to develop mechanisms for strengthening cooperation in transboundary water flow management on the basis of international and legal instruments, which takes into account the interests of all Central Asian states:

- Readiness for further improvement of organizational and contractual-legal framework of IFAS to enhance efficiency of its activities and achieve more active interaction with financial institutions and donors in implementation of the projects and programs related to solving the Aral Sea basin issues.
- Development of mutually acceptable mechanism for multipurpose use of water resources and environmental protection in Central Asian states which takes into account the interests of all states in the region.
- Creation of national informational systems and database which will become the basis for the regional system recognized by all states.
- Raise of public participation and awareness of water management issues
- Improvement of the water accounting system and introduction of SCADA system with its technical and metrological support
- Contribution to the realization of the regional projects.

**Priorities in adoption of innovations in agrarian sector in order to achieve food security.**

Achieving food security is a priority issue for Uzbekistan, given its landlocked location; low incomes in rural areas, and transition from planned to market economy. The natural and climatic conditions of the country favor agricultural development but key constraints to achieve food security include:

- limited areas under irrigation and land productivity;
- limited water availability, and inefficient water use;
- artificial water shortage and competition between hydropower (energy regimes) and irrigated agriculture.

Hence, to achieve food security the agrarian sector of Uzbekistan have to focus on innovation to improve land and water productivity. Target is to increase water productivity by 50% and land productivity by 20% through the adoption of water saving technologies by 2025. Improve water and land productivity on the basis of developing and promoting efficient technologies through interaction between different organizations of water and agricultural sectors. Mechanisms should include:

- engineering and technical solutions for developing water accounting system, planning and water allocation;
- organizational solutions to improve management system at WUA and farm levels;
- economic incentives for WUAs and farmers to improve water and land productivity linked with payments for water delivery, including increased share of water resistant cash crops;
- legal support to legitimize reforms and ensure compliance; and
- innovative partnerships at multiple levels and scales.

**Integrated water resources management**

Currently, Uzbekistan is undertaking regional and national measures on the implementation of IWRM principles. The most significant step towards IWRM has been made under the regional project “IWRM-Fergana” implemented by water authorities of Kyrgyzstan, Tajikistan, and Uzbekistan under overall coordination of the SIC ICWC and IWMI and financial support of the Swiss Development Cooperation.

In Uzbekistan, IWRM process started from bottom-up – from end users level to higher levels of water management hierarchy: WUA – Irrigation System – Basin, with involvement of specific stakeholders at those levels. While there is a basic understanding on IWRM in the country, wide dissemination of approaches to put IWRM principles into practice are still needed.

National target is practical implementation of the IWRM principles at almost 50% of irrigated area up to 2020. Solution requires, inter alia:

- National IWRM Plan should be adopted by National Water Authority. Development of national master-plans for Syrdarya and Amudarya.
- Triggering IWRM policy dialogue in Uzbekistan to promote wider public participation in water governance at multiple levels in 2013-2015. The main issues of policy dialogues are - how to ensure the legal arrangements for the Public Water Bodies involved, what financial mechanisms for their involvement are needed.
- Establishment of a network of training centers and coordinated capacity development process over the Aral Sea Basin Program-3. This training network should provide training and wide popularization of IWRM principles and water users' participation during 2013-2015 and beyond.
- Creation of expert working groups for legal and financial justification of IWRM and its implementation, improving water charging mechanisms, legal and financial coordination of efficient water use aspects at multiple levels.
- Assistance to the national water authorities to attract funds for technical measures, aiming at: introduction of water record keeping; contribution of hydro-meteorological services in IWRM; establishing the extension service for improving the water productivity; computerization of managing the water supply and irrigation systems; water-saving interventions, etc.

#### **Climate change and conserving environmental capacity.**

The impact of climate change is apparent across Central Asia, posing risks to National development in Uzbekistan, affecting water availability and use, agricultural activities, and population health among other things. As result of average annual temperature rise by about 1°C over the past twenty years, the glaciers of Central Asia have already shrunk on one third. Glacial retreat causes flood events in the short-term, and declines in long-term water availability, thus intensifying the aridity of the region. Growing risks of water shortage and intensification of droughts, floods and other extreme events make climate change and water issues are of particular importance for Uzbekistan in its endeavors to ensure sustainable development. In this regards, it is necessary to identify climate-related threats for Uzbekistan, individual areas (provinces) and elaborate ways for the adaptation to climate change.

Uzbekistan's national target addressing to assessment of supposed change of water availability in principal water basins and preparation of action plan to ensure access to water under new conditions. Establishment of special team of experts for preparation of a set of specific measures for adaptation to climate change. A set of measures for adaptation to climate change and conservation of environmental capacity includes:

- Measures for development of hydrometeorological and climate monitoring;
- Measures to monitor the impact of climate change on frequency of extreme events;
- Measures to support sectors of economies, depending on water resources;

- Measures to mitigate climate change impact on water resources and economic sectors, including better flow regulation to address low water years;
- Measures for improvement of aquatic ecosystems and environment conservation; and
- Measures to improve decision-making systems;
- Measures to raise awareness of the general public and decision-makers on adaptation to climate change and mitigation of its consequences.

It is necessary to improve understanding among wider circle of stakeholders and institutions on potential climate change impacts and a need for long-term planning. Programs to educate future generation to live under conditions of water scarcity are also required.

### **3. WATER RESOURCES MONITORING AND REPORTING ISSUES**

The national hydrometeorological service of Uzbekistan carries out the hydrological observation in an operative mode (daily) in all territory (see map in Fig.2). The hydrological information is open and is accessible to its basic users. On a number of the key rivers the hydrometric supervision, as well as meteorological on basic weather stations, were organized in the beginning of XX century. There are numbers of periodic supervision since 1911. Most advanced the system of monitoring was in the middle of 80-es. However, in 90-es because of common economic destabilization this system became gradually degrade. The plenty of posts is closed because of impossibility of their normal operation and modernization of the equipment

The quantitative measurements carried out on the out-of-date equipment three times per day with enough low accuracy, and the qualitative measurements at their low periodicity (once per one week) in general is registration of the casual data, which at all do not guarantee their reliability. Still disadvantage is represented by system of transfer given from these posts to the national center in Tashkent on paper carriers with the subsequent large backlog in time and distribution among basic water users - Ministry of Agriculture and Water Management, BWOs, etc.

The worst situation develops with observation of a snow cover and glaciers in a mountain zone, that is a basis for the hydrological forecasts. In the past of supervision over snow and ice were made on 250 points in 24 basic river basins of the region. Today such regular observations are conducted only in three river basins. The regular observation on glaciers are completely stopped. Therefore special attention today is given to methodical works on the satellite information use for these purposes.

Another problem is the deterioration of a regional exchange of the information between national services – other countries of Central Asia, no less than the creation of a uniform information service, and also realization of observation of salt-dust transportation, condition of deltas of the rivers etc. Is paradoxical, but fact, that practically now observation over of the Aral sea dynamics are conducted only in one point.

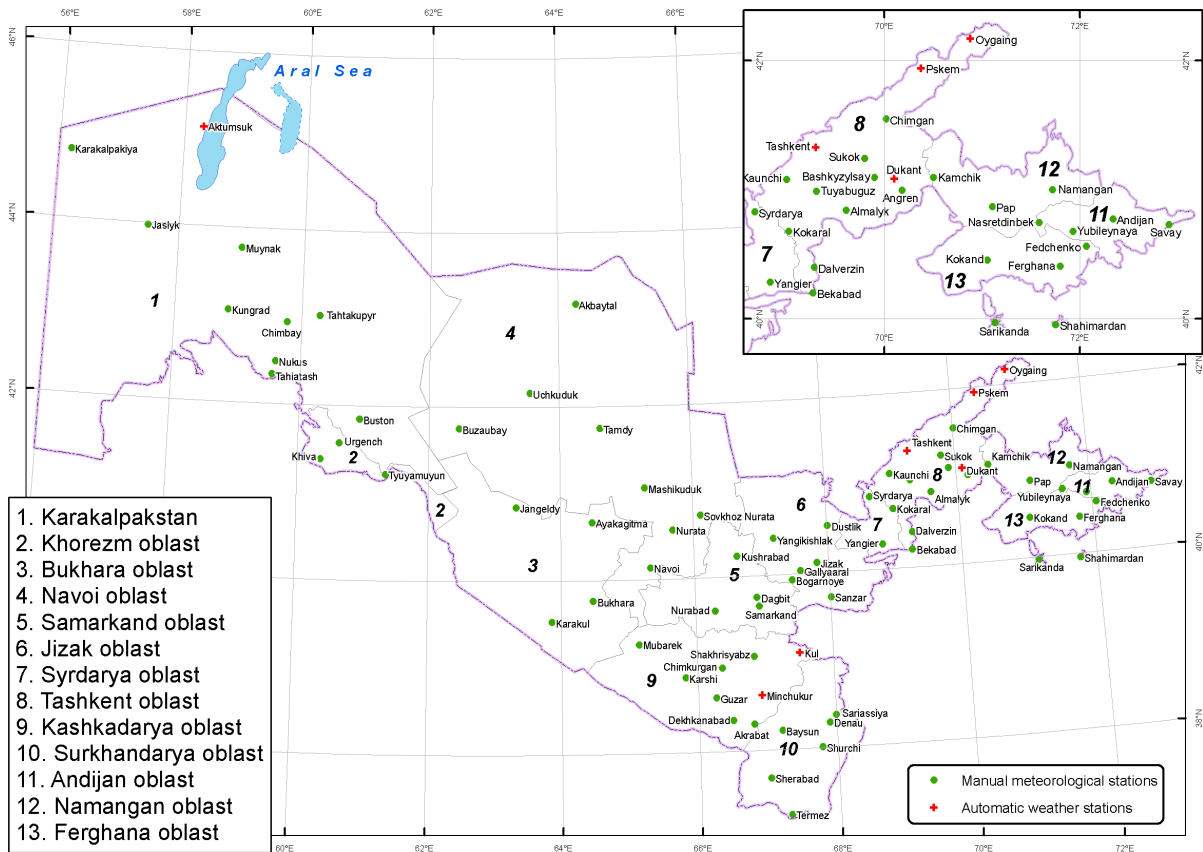


Fig. 2. Observation network of the Uzbek Hydromet Service

Priorities in Hydromet Services for future:

- Development and improvement of the state system of meteorological observations;
- Hydrometeorological support sectors of the economy, the population and the armed forces of the Republic of Uzbekistan;
- The formation and maintenance of the State Hydrometeorological fund data, the State Data on pollution of the environment, public accounting of surface water;
- Coordination of all work on the creation and maintenance of the state water cadastre;
- Systematic observation of air pollution, soil, surface water, as well as the emergence and development of extreme weather events;
- Conduct research to improve the short-and long-term weather forecasts, water availability, climate change.

**ANNEX: List of participants:** Training Center of ICWC, Tashkent, Uzbekistan, March 11, 2013

1. Mr. Mamutov Ravshan - Deputy Head of the main department for water resources of Ministry of Agriculture and Water Resources of Uzbekistan
2. Mr. Akhmadjonov Vokhid - Head of Water Balance Division, Ministry of Agriculture and Water Resources of Uzbekistan
3. Mr. Asadov Sherzod – First Secretary of the Department for Relations with NIS in the Ministry of Foreign Affairs of Uzbekistan
4. Ms. Saifutdinova Mastura - Member of the Legislative Chamber of the Parliament of Uzbekistan
5. Mr. Sanginov Saidrasul – Deputy Chairman of the Board of the Ecological Movement of Uzbekistan
6. Ms. Yarulina Zulfiya – Head of Department of the State Committee for Nature Protection of Uzbekistan
7. Mr. Myagkov Sergei – Deputy Director of Uzbek Hydromet Center
8. Mr. Haidarov Tokhir – Head of Department of Regional Water Supply Systems of the Uzbek Agency "Uzkommunkhizmat"
9. Mr. Umarov Pulatkhon – Head of Capacity Development in the Land Reclamation Fund under Ministry of Finance of Uzbekistan
10. Mr. Umarov Hamdam - National coordinator on IWRM implementation in Uzbekistan
11. Mr. Ibadullayev A. - Head of Basin Administration of Irrigation Systems "Lower Syrdarya"
12. Mr. Abdurazakov Jahongir – Head of Basin Administration of Irrigation Systems "Chirchik - Akhangaran"
13. Mr. Rakhimov Shavkat - Director of the Institute of Water and Irrigation under TIIM
14. Mr. Salohiddinov A. - Vice President of the Tashkent Institute of Irrigation and Melioration (TIIM)
15. Mr. Kobilov Hamid - Director General of the Institute "Vodproject"
16. Mr. Loktionov Aleksander – Chief Engineer of the Basin Water Organization "Syrdarya"
17. Mr. Victor Dukhovny - Director of Scientific-Information Center of the Interstate Commission for Water Coordination
18. Ms. Ziganshina Dinara - Deputy Director of Scientific-Information Center of the Interstate Commission for Water Coordination
19. Mr. Mirzaev Nazir – Senior Specialist, Scientific-Information Center of the Interstate Commission for Water Coordination
20. Mr. Artemiev Nikolai – Specialist, Scientific-Information Center of the Interstate Commission for Water Coordination
21. Ms. Galustyan Aurika – IWRM-Fergana Project Manager, Scientific-Information Center of the Interstate Commission for Water Coordination
22. Mr. Sorokin Anatoliy - Head of Department of Water Resources, Scientific-Information Center of the Interstate Commission for Water Coordination
23. Ms. Degtyareva Anastasiya – Specialist of Scientific-Information Center of the Interstate Commission for Water Coordination
24. Mr. Rysbekov Yusup - Director of the ICWC Training Center

25. Mr. Kamalov Yusup - Chairman of GWP CACENA, Director of NGO Union for Defence of the Aral Sea and Amudarya
26. Mr. Sokolov Vadim - Regional Coordinator of GWP CACENA
27. Ms. Khaydarova Valentina – Communication Officer, GWP CACENA
28. Mr. Abduraimov Mansur - Coordinator of CWP Uzbekistan, Director of NGO Protection of the Zeravshan river basin
29. Mr. Domulladjanov Ibragim - Chairman of the NGO "For Clean Fergana"
30. Ms. Kasymova Nargiza – Journalist of the Environmental website for Uzbekistan
31. Mr. Tulyaganov Adkham – Senior Trainer of the Training Center ICWC
32. Ms. Tsai Elena - Senior Trainer of the Training Center ICWC
33. Ms. Poltareva Olga – Specialist of the Training Center ICWC



Working moments during the national consultations in Training Center of ICWC on 11 March, 2013



Presentation from Mr. Akhmadjonov, Head of Water Balance Division, Ministry of Agriculture and Water Resources of Uzbekistan.

